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PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
Mark L. Chivers

Serial No.: To be assigned

Filed: Herewith

For: CLARIFICATION OF PROTEIN

PRECIPITATATE SUSPENSIONS USING ANIONIC POLYMERIC FLOCCULANTS

Group Art Unit: To be assigned

Examiner: To be assigned

Atty. Dkt. No.: 11916.0042.DVUS00

(MOPV042--1/PAT)

PRELIMINARY AMENDMENT

Commissioner for Patents Washington, D.C. 20231

Sir:

Please amend this application as follows:

In The Specification

Please amend page 2, first paragraph, to recite:

--This is a divisional of co-pending application Serial No. 09/354,493, filed July 16, 1999, which is a conversion of provisional application serial No. 60/093,555, filed July 21, 1998.--

In the Claims

Please cancel claims 1-35, without prejudice.

Please amend claim 36 to read as follows:

36. (Amended) An aqueous ST protein suspension comprising somatotropin monomers, somatotropin oligomers, and an anionic polymer having a polymer charge density of less than about 30%.

REMARKS

Claims 1-35 were prosecuted in the parent case, application Serial No. 09/354,493 and thus have been canceled from this divisional application. The parent application was allowed on May 30, 2001 but has not yet issued.

The active claims in this case are claims 36-52, with claim 36 being amended. Note that a complete copy of all pending claims, including a marked up version of the amended claim, is attached hereto.

The specification has been amended to recite the relationship with the parent case, and the claims have been amended to bring them into alignment with the scope of the claims allowed in the parent case.

It is believed that no fee is due; however, should any additional fees under 37 C.F.R. §§ 1.16 to 1.21 be required for any reason relating to the enclosed materials, the Commissioner is authorized to deduct said fees from Deposit Account No. 01-2508/11916.0042.DVUS01.

Respectfully submitted,

Malhar Mudsen

Matthew L. Madsen

Reg. No. 45,594

Agent for Assignee

MONSANTO TECHNOLOGY LLC

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Date: August 27, 2001

CLAIMS:

- 36. (Amended) An aqueous ST protein suspension comprising somatotropin monomers, somatotropin oligomers, and an anionic polymer <u>having a polymer charge density of less</u> than about 30%.
- 37. The ST protein suspension of claim 36, wherein the anionic polymer is a polyacrylamide.
- 38. The ST protein suspension of claim 37, wherein the polyacrylamide has a polymer charge density between about 5% and about 12%.
- 39. The ST protein suspension of claim 37, wherein the polyacrylamide has a polymer charge density between about 8% and about 11%.
- 40. The ST protein suspension of claim 36, wherein the anionic polymer is a polysaccharide.
- 41. The ST protein suspension of claim 40, wherein the anionic polymer is starch or modified cellulose.
- 42. The ST protein suspension of claim 40, wherein the polysaccharide is potato starch.
- 43. The ST protein suspension of claim 36, wherein the anionic polymer is present in the suspension at a concentration between about 1 and about 1000 ppm.
- 44. The ST protein suspension of claim 36, wherein the anionic polymer is present in the suspension at a concentration between about 10 and about 100 ppm.
- 45. The ST protein suspension of claim 36, wherein the anionic polymer is present in the suspension at a concentration between about 20 and about 30 ppm.
- 46. The ST protein suspension of claim 36, wherein the anionic polymer's average molecular weight is greater than about 100,000.
- 47. The ST protein suspension of claim 36, wherein the anionic polymer's average molecular weight is greater than about 1,000,000.

- 48. The ST protein suspension of claim 36, wherein the anionic polymer's average molecular weight is greater than about 10,000,000.
- 49. The ST protein suspension of claim 36, wherein the anionic polymer has a polymer charge density between about 5% and about 12% and an average molecular weight greater than about 10,000,000.
- 50. The ST protein suspension of claim 36, wherein the somatotropin is bovine somatotropin.
- 51. The ST protein suspension of claim 36, wherein the anionic polymer is a polyacrylamide present in an amount from about 1 to about 100 ppm having a polymer charge density from about 5% to about 12% and an average molecular weight greater than about 1,000,000.
- 52. The ST protein suspension of claim 36, wherein the pH of the protein suspension is about 4.5, and the anionic polymer is a polyacrylamide present in an amount of about 25 ppm, having a charge density of about 10%, and an average molecular weight of about 16,000,000.